Experimental Techniques – 2022 Nov IGCSE Chemistry 0620

1. Nov/2022/Paper_11/No.2

Which row describes the spacing and arrangement of particles in a solid, a liquid and a gas?

	solid	liquid	gas
A	close together and randomly arranged	close together and regularly arranged	far apart and randomly arranged
B	close together and randomly arranged	far apart and randomly arranged	close together and randomly arranged
C	close together and regularly arranged	close together and randomly arranged	far apart and randomly arranged
D	close together and regularly arranged	close together and regularly arranged	close together and randomly arranged

2. Nov/2022/Paper_11/No.3

Which piece of apparatus is used to measure exactly 25.0 cm^3 of hydrochloric acid?

A beaker

B burette

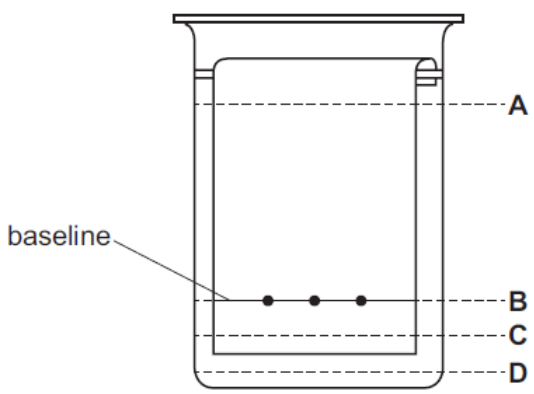
C conical flask

D test-tube

3. Nov/2022/Paper_12/No.2

The apparatus used in a chromatography experiment is shown.

Which line shows the starting depth of the solvent in the beaker?



4. Nov/2022/Paper_12/No.3

Filtration is used to separate mixtures.

Which type of mixture is separated by filtration?

A an insoluble solid from a liquid

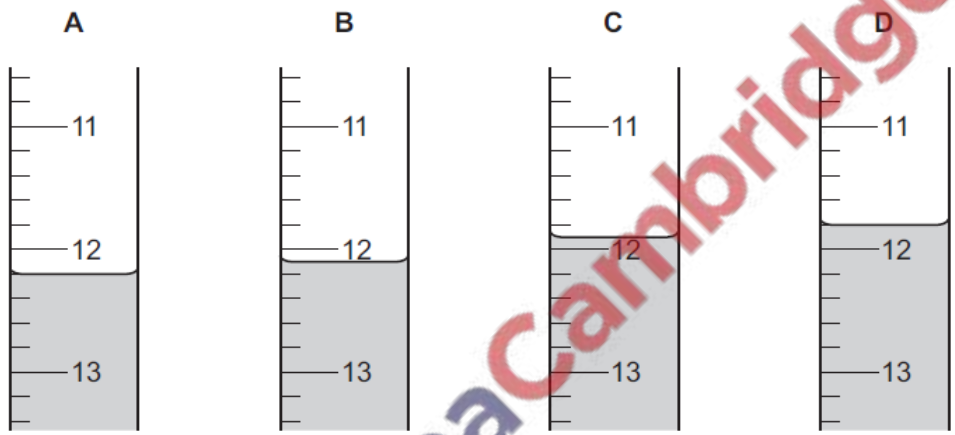
B a liquid solvent from a solution

C a dissolved solid from a solution

D a liquid from a mixture of liquids

5. Nov/2022/Paper_13/No.2

Which burette shows a reading of 12.1 cm^3?



6. Nov/2022/Paper_13/No.3

A solution of sodium chloride is mixed with a solution of silver nitrate.

A white precipitate of silver chloride and a colourless solution of sodium nitrate are formed.

Which method is used to separate the silver chloride from the mixture?

A crystallisation

B distillation

C filtration

D use of a solvent

7. Nov/2022/Paper_21/No.2

A coloured dye is separated by chromatography.

One component of the dye moves a distance of 13 cm and has an R_f value of 0.86.

Which distance did the solvent front move?

A 6.6 cm **B** 11.9 cm **C** 15.1 cm **D** 21.6 cm

8. Nov/2022/Paper_21/No.3

A mixture contains salt, sand and sulfur.

Salt dissolves in water but not in xylene.

Sulfur dissolves in xylene but not in water.

Sand does not dissolve in water or xylene.

What is the order of the processes used to separate the salt, the sand and the sulfur from the mixture?

A add water → filter → add xylene to the filtrate → filter

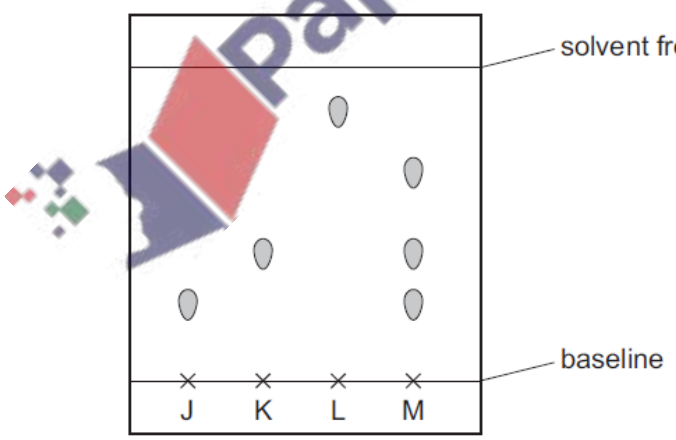
B add water → filter → add xylene to the residue → filter

C add xylene → filter → add water to the filtrate → filter

D add xylene → filter → add xylene to the residue → filter

9. Nov/2022/Paper_22/No.3

The chromatogram obtained using four substances, J, K, L and M, is shown.



Which statement about M is correct?

A It is a mixture of J and K only.

B It is a pure substance.

C It is a mixture of J, K and L.

D It is a mixture of J, K and an unknown substance.

10. Nov/2022/Paper_23/No.2

The chromatogram from four different substances is shown.

Which pure substance has the largest R_f value?